In Conversation: Peter Cooper

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Peter Cooper, Director of IDRC's Environment and Natural Resources Management Program Area (ENRM), joined the Centre in September 2000. He received his Ph.D in Soil Science from Reading University and has lived and worked extensively in Africa and the Middle East with Britain's Official Development Administration (now the Department for International Development) and the CGIAR system. Prior to joining IDRC, Dr Cooper was Director of Research and, most recently, Leader of the Systems Evaluation and Dissemination Program at the International Centre for Research in Agroforestry in Kenya.

Why does IDRC have an Environment and Natural Resources Program Area?

Natural resources — soils, climate, vegetation — are absolutely fundamental factors in production systems in developing countries. One of the problems in many countries is rapid population growth. As a result, agricultural systems in high potential areas that have been reasonably stable over many years are coming under increasing pressure. There are two main issues: far more intensive cultivation is occurring, and this is putting severe pressure on those natural resources. And secondly, as population increases in areas that are imminently suitable for agriculture, the population is being squeezed out onto much more marginal areas.

In addition, we see a high rural-urban migration. People are moving from the countryside to urban centres partly because this pressure on resources is lowering the potential of agriculture to support them and their families, but also in many urban centres there are opportunities, both real and perceived, for employment that perhaps don't exist in rural settings. So we're also seeing a very interesting phenomena — the development of urban agriculture. Some estimates suggest that there will be more urban farmers in sub-Saharan Africa by 2020 *than* real farmers!

What are IDRC's priority research thrusts in this field?

Natural resources management is a hugely broad area. IDRC has identified six specific areas on which to focus its research: first, Community-Based Natural Resources Management — we have regional programs for Latin America, Africa, and Asia; and Cities Feeding People, which looks specifically at the management of natural resources by urban populations.

We're also looking closely at the implications of natural resources management on health — through a rather unique program called ecohealth. Societies living in ecosystems have a range of different reasons why they manage their ecosystem the way they do. Usually, it's productivity oriented: they want to get as much food, as much cash crop, as much income as they can to support their families. They probably put a lower priority on the implications of that management system on their health. So the challenge in ecohealth is how to manage that trade-off between the goals and objectives of societies in managing ecosystems and the implications on their health.

The last area is Sustainable Use of Biodiversity. There is a very genuine and sensible concern globally about the way the world is losing so much of its biodiversity. So we have chosen to look specifically at the sustainable use of biodiversity, with a special focus on medicinal plants. In so many developing countries, medicinal plants have been and will continue to be crucial to the

general health of populations, especially those who are not reached or cannot afford the more formal health sector.

IDRC is increasingly working to bring the results of its research to policymakers. What are the main opportunities for doing so?

We need to recognize that policy-making takes place on different scales. It's not just for a president and his ministers, or members of parliament. You've got district, municipal, and community levels — even down to families. And so we need to think very carefully about what information is needed to enable this whole hierarchy of decision-makers to make the best possible decision.

Let me give you an example from Zambia where a village chief made a policy decision that completely turned around the ability of his people to manage their natural resources. This was a village where soil fertility was very degraded and leguminous tree fallows had been identified by both farmers and researchers as having huge potential for restoring soil fertility and providing useful byproducts. Farmers were very keen on experimenting with them. But in the dry season in that part of Zambia, they let the livestock loose to graze crop residues and whatever they can. So young trees, which had been planted out to establish these tree fallows, were being grazed and killed. The chief in that village made a rule: somebody had to stay with the cattle and goats to make sure they didn't move into an area where these trees were being planted. He also said that the owner of any animals grazing the trees would have to pay. Suddenly, we saw the adoption of these trees take off.

So here's an example of a decision taken at quite a low level that really changed people's lives, and that was the right level for that decision to be taken.

Are there new areas of research in ENRM that IDRC might pursue?

There are two areas we're still trying to come to grips with: one is HIV/AIDS, particularly in Africa. IDRC probably has no comparative advantage in looking at the mitigation of AIDS, or a cure for AIDS, or increasing the education of populations on how to avoid becoming infected. But we are well placed and need to look at what the current and future impacts of AIDS are likely to be on rural and urban labour forces.

There is no doubt in Africa that the labour force is being severely affected. In Kenya, for example, many families just can't cultivate as much land as they used to. In other places, farmers working soil on steeply sloping land use traditional soil erosion control structures, which need to be maintained. Now they're unable to maintain them, so you start seeing soil erosion becoming a serious problem. So if we are supporting work that looks at sustainable ways of managing natural resources, we need to think of what labour inputs are required, how AIDS is changing the rural and urban labour profiles, and what are the implications for the way in which people now and in the future will be able to manage their resources.

The other area which is very important, and in which Canada has strong interests, is the interaction between climate change — global warning — and the way people manage their natural resources. For example, if you take a primary rain forest and start cutting it down for agriculture, you're releasing huge amounts of carbon, which is locked up in that forest, into the atmosphere and increasing global warming. On the other hand, if you move into a landscape, which is basically agricultural, and start replanting trees — that's what agroforestry is all about — you're increasing the ability of that landscape to store carbon.

This area is obviously very important, and IDRC needs to think how it will address it. One possible way is associated with the fact that as global warming occurs, climatic events — which are naturally variable in any environment — are likely to become more extreme. That poses quite a challenge for communities. Will they be able to cope with that variability if it becomes substantially more pronounced? Do we need to look at ways of increasing their ability to cope with greater variability?

Are there other areas that you would like IDRC to focus on?

One area is the issue of scaling up the adoption of innovative ways of managing natural resources. IDRC encourages a very participatory approach to natural resource management. As a result, in any given research project that may encompass four or five villages, you begin to see farmers adopt new ideas and implement them in their communities and on their farms. This is a natural product of the communities' involvement in the research process.

The real challenge is how to scale that up from 500 families to 5000 families, to 50,000, to half a million. IDRC needs to encourage and facilitate our recipients, research workers, and development workers to work together so there's a greater exchange of information between research institutions and the traditional development institutions and extension services or NGOs. I am convinced that, as an institution, we need to think of the best way we can to catalyse that partnership between research and development.